VIA FACSIMILE TRANSMISSION - Official
To TC2600 at Fax Number (703) 872-9314
Application No. 08/879,467
December 9, 2003

In the Claims

The following listing of claims will replace all prior versions of the claims in this application.

Listing of Claims

Claims 1-18 (cancelled)

Claim 19 (currently amended): A coded image capture and decoding system comprising:

a capture system comprising:

an optical system that captures image data from coded targets, so as to ~~generated~~ generate a plurality of image data groups each representing information concerning a coded target as a whole;

a first processing circuit, coupled to the optical system, that generates a plurality of undecoded images each based on one of the image data groups received from the optical system, so that said plurality of undecoded images each represents information concerning a coded target as a whole; and

an image buffer, coupled to the first processing circuit, that stores said plurality of undecoded images generated by the first processing circuit; and

a host system, comprising:

a non-dedicated second processing circuit, for coupling to the image buffer, that, after said plurality of undecoded images each representing information concerning a coded target as a whole, are stored in the image buffer, after a request

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by the capture system, and with the non-dedicated second processing circuit having received the plurality of undecoded images from the image buffer so as to have the plurality of undecoded images available at a time for processing, attempts decode processing of said plurality of undecoded images.

Claim 20 (currently amended): A coded image capture and decoding system comprising[[;]]:

a remote capture unit comprising:

an image buffer that stores a plurality of undecoded images each representative of a coded target; and

a host image processing unit operably coupled to the remote capture unit, the host image processing unit comprising:

a processing circuit operable to effect decoding of undecoded images; and

coded processing circuitry, communicatively coupled to the processing circuit, selectively directing the processing circuit to decode the plurality of undecoded images each representative of said coded target.

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Claim 21 (new): A coded image capture and decoding system comprising:

(a) an optical system that captures image data from coded targets, so as to generate a plurality of image data groups each representing information concerning a coded target as a whole;

(b) a first processing system, coupled to the optical system, that supplies a plurality of undecoded images each based on one of the image data groups received from the optical system, so that said plurality of undecoded images each represents information concerning a coded target as a whole;

(c) an image buffer, coupled to the first processing system, that stores said plurality of undecoded images generated by the first processing circuit; and

(d) a non-dedicated second processing system, for coupling to the image buffer, that, after said plurality of undecoded images each representing information concerning a coded target as a whole, are stored in the image buffer, after a notification to the non-dedicated second processing system of the presence of said plurality of undecoded images in the image buffer, and with the non-dedicated second processing system having the plurality of undecoded images available at a time for processing, attempts decode processing of said plurality of undecoded images.

Claim 22 (new): The coded image capture and decoding system of claim 21 wherein said non-dedicated second processing system selectively attempts decode processing of

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each of said plurality of undecoded images in succession, while the optical system may be in a power saving state until expiration of a time interval before resuming image capture operation

Claim 23 (new): A coded image capture and decoding system of claim 21 wherein; said non-dedicated second processing system upon successful decoding of any one of the plurality of undecoded images ignores notification of a further plurality of undecoded images being in the image buffer where such further plurality of undecoded images may be of the same coded target from which an undecoded image has just been successfully decoded.

Claim 24 (new): The coded image capture and decoding system of claim 21 wherein the optical system captures two-dimensional coded image data from the two dimensional code of a coded target, so as to generate a plurality of two-dimensional coded image data groups each representing information concerning the two-dimensional code as a whole, the first processing system supplying a plurality of undecoded two-dimensional coded images each representing the two-dimensional code; and the non-dedicated second processing system having said plurality of undecoded two-dimensional coded images available at one time for processing, attempts decode processing thereof.

Claim 25 (new): The coded image capture and decoding system of claim 21 wherein the first processing system supplies a reference undecoded image in its entirety, and a

plurality of further undecoded images representing the differences of a plurality of image data groups from the reference undecoded image.

Claim 26 (new): A coded image capture and decoding system comprising;

a capture unit comprising:

an image buffer that stores a plurality of undecoded images each representative of a coded target; and

a host image processing unit operably coupled to the capture unit, the host image processing unit comprising:

a processing circuit operable to effect decoding of undecoded images; and

coded processing circuitry, communicatively coupled to the processing circuit, selectively directing the processing circuit to decode the plurality of undecoded images each representative of said coded target.

Claim 27 (new): The method of processing optically read two-dimensional code images from a two-dimensional code of a two-dimensional coded target, said method comprising

a) assembling in an image buffer a plurality of undecoded two-dimensional code images each representing information concerning the two-dimensional code as a whole;

b) after assembly of the plurality of undecoded two-dimensional code images in the image buffer, signaling a non-dedicated processor capable of reading the two-dimensional code, to process the information in the image buffer; and

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c) the non-dedicated processor, after receipt of a signal that a plurality of undecoded two-dimensional code images are assembled in the image buffer, at a time selected by the non-dedicated processor, carrying out a decode processing which selectively includes processing of all of the plurality of undecoded two-dimensional code images in the image buffer.

Claim 28 (new): The method of claim 27, wherein the optically read two-dimensional images are read from a two-dimensional optical code by a two-dimensional raster scanning laser system.

Claim 29 (new): The method of claim 27, wherein the optically read two-dimensional images are read from a two-dimensional optical code by an array of photo detectors capable of capturing reflections from the entire two-dimensional coded target.

Claim 30 (new): The method of claim 27, wherein at least five two-dimensional images are read from the two-dimensional code of the two-dimensional coded target before the non-dedicated processor is signaled to process the information in the image buffer.

Claim 31 (new): The method of claim 30, wherein the at least five two-dimensional images are screened and only two-dimensional images meeting the screening requirements are assembled in the image buffer, the non-dedicated processor not being signaled if less than two undecoded images have been assembled in the image buffer after screening of the at least five two-dimensional images.